

## **REMARKS**

Claims 1-27 were pending in the application. Claims 1, 14, and 22 have been amended. Claims 4-5, 17-18, and 27 have been cancelled. Accordingly, claims 1-3, 6-16, and 19-26 remain pending in the application. Reconsideration is respectfully requested in view of the amendments to the claims and the following remarks.

### **I. The § 102/103 Rejections**

Claims 1-3, 10-16, and 23-27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by a journal article entitled, “Chronological Scheduling of Transactions with Temporal Dependencies” by Dimitrios Georgakopolous (“Georga”).

Claims 4, 6, 8, 17, 19, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Georga in view of U.S. Patent No. 6,029,177 (“Sadiq”).

Claims 5, 7, 9, 18, 20, and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Georga in view of Sadiq and U.S. Patent Application Publication No. 2002/0156761 (“Chen”).

Applicant respectfully traverses the rejections.

Applicant has amended claim 1 to include the limitations of claims 4 and 5, and has amended claim 14 to include the limitations of claims 17 and 18.

Claim 1, as amended, recites a method for handling transaction messages in asynchronous data replication in a database system, in which the database system includes a source node and a target node, and each transaction message has information concerning a row change to a table copy at the source node.

The method includes determining whether a first transaction message has a dependency on a preceding non-completed transaction message. Responsive to the first transaction message

having a dependency on the preceding non-completed transaction, the method further includes holding the first transaction message; completing the preceding non-completed transaction message including applying the row change associated with the preceding non-completed transaction message to the table copy at the target node; and responsive to completing the preceding non-completed transaction message, releasing the first transaction message and applying the row change associated with the first transaction message to the table copy at the target node.

The method further includes determining that the row change in the first transaction message is an insert or a key update type of change; comparing a new replication key value in the row change in the first transaction message to an old replication key value of a row change in the preceding non-completed transaction message, including comparing a hash value of the new replication key value in the row change in the first transaction message to a hash value of the old replication key value in the row change in the preceding non-completed transaction message; and determining that the first transaction message has a dependency on the preceding non-completed transaction message if the new replication key value in the row change in the first transaction message is the same as the old replication key value in the row change in the preceding non-completed transaction message.

The Examiner recognizes that Georga and Sadiq fails to disclose comparing a hash value of a new replication key value in a row change (in a first transaction) to a hash value of an old replication value in a row change (in a preceding non-completed transaction). The Examiner, however, cites paragraph [0073] of Chen as disclosing this limitation.

In paragraph [0073] Chen discloses a hash table that stores hash keys, and while Chen does disclose comparing an existing hash value with a new hash value – the existing hash values

in the hash table do not correspond with a preceding non-completed transaction, as required by claim 1. Applicant respectfully submits, therefore, that claim 1 (and the claims that depend therefrom) are allowable over Georga, Sadiq, and Chen.

Claim 14 incorporates limitations similar to those of claim 1. Claim 14, and the claims that depend therefrom, should be allowable over Georga, Sadiq, and Chen for at least those reasons set forth in connection with claim 1.

Should any unresolved issues remain or should the claims need any further clarifying amendments to expedite allowance of the pending application, the Examiner is invited to call the undersigned at the telephone number indicated below.

Respectfully submitted,  
SAWYER LAW GROUP LLP

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